

ENKA

voice

MARCH • 1954



MARCH, 1954

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Our Covers . . . Front:
Cute Nan Ries models a
Leslie Day afternoon dress
woven of Enka Sheer.

To be advertised in April
Glamour, this dress is sold
at Lord & Taylor, New
York; W. Filene, Boston;
Woodward & Lothrop,
Washington; D. H. Holmes,
New Orleans; Higbee Com-
pany, Cleveland; and Fred-
erick & Nelson, Seattle.

Back: Mrs. Azalea Trent
inspects quality of fiber on
a creel in Lowland's new
Textile Lab. (See story
on Page 16.)

New Textile Lab

Lowland Textile Lab employees,
like Mrs. Marjorie Shockley —
shown here drying a dyed knitted
tube on a steam form — say their
new home is "like a dream come
true." (See Page 16.)

Published monthly by American
Enka Corporation, manufacturer of
high quality rayon yarns, in the
interest of its employees. Jack
Prickett, Editor; G. Spaanbroek,
Art Director; Wilson Ayers, Sports
and Recreation Editor; Bob Lee,
Lowland Correspondent; Maynard
Bumgardner, Enka Photographic
Contributor; and Claude Hartman,
Lowland Photographer.

PUBLISHED AT ENKA, N. C.



MARK CATHEY, superintendent of the Enka Plant Textile Dept., last month, on behalf of his department, accepted the 1953 plant-wide safety award at a dinner meeting at the Enka Lake Club (see story below). Standing, left to right, are Millard Robinson, slashing foreman; Gardner Bridges, twisting foreman; Mr. Cathey; Sherrill Clark, twisting foreman; Jim Keith, slashing foreman; and Plant Manager E. M. Salley, Jr. Seated, facing the camera, are Bill Jones, superintendent of the Finishing Dept.; and Paul Markwood, superintendent of the Nylon Dept.

● FACTS AND FACES

Enka Plant Textile Dept. Wins 1953 Safety Award; Plaque Given

An engraved plaque for the best 1953 safety record at the Enka Plant was awarded to employees of the Textile Dept. during the semi-annual supervisory get-together at the Enka Lake Club Feb. 6.

Although previous safety contests had been held, 1953 was the first year of plant-wide competition and the first year in which the Textile Dept. was eligible to participate. In winning, the 714 members of this department worked 1,279,000 man-hours without a single lost-time ac-

cident.

Superintendent Mark Cathey accepted the award, which was presented by Plant Manager E. M. Salley, Jr. Mr. Cathey attributed his department's success in large measure to the fact that, in addition to regular safety meetings, each foreman personally discusses safety and other matters with every employee under his supervision at least once a month.

Several other organizational units also completed the year without a

(Continued on Page 4)



J. J. SCHILTHUIS, seated left, American Enka's director of processes, last month received a Lyceum wristwatch from Dr. Martin Wadewitz, technical vice-president, in recognition of 25 years' service with the Company. Mr.

Schilthuis came to Enka Feb. 5, 1929, after 5½ years as a chemical engineer with A. K. U. in Holland. He is shown with his close associates through the years.

Textile Dept. Wins Plaque For Best '53 Safety Mark

(Continued from preceding page)

disabling injury: the Spinning Dept.; the Finishing Dept.; the Textile, Microscopical, and Chemical Laboratories, and the Spinnerette and Glass-Blowing Sections; the Research Dept.; and the Main Offices. The Textile Dept., however, accumulated the greatest number of man-hours and, consequently, had the lowest accident frequency percentage.

Dr. George Heaton, pastor of the Myers Park Baptist Church of Charlotte, was the principal speaker at the meeting.

Discussing methods which supervisors might use to increase further the observance of safe working conditions, he stressed the importance of good supervisor-employee communication and the feeling of participation which results from it.

3 Lowland Departments Promote 13 Employees

Thirteen appointments of new supervisory personnel were announced last month in three Lowland production departments.

In the Potspinning, Continuous Spinning, and Finishing Dept., 10 assistant shift foremen were named—five in the Spinning and Acid Bath Section, and five in the Cake Bleach Unit of the Finishing Section.

Two shift foreladies were appointed in the Coning Unit of the Textile Dept., and one assistant foremanship was announced in Plant Engineering.

The Spinning appointments were effective Feb. 1. F. L. Felknor, L. E. Bivens, E. L. Holt, and Robert Lawson all were promoted from spinners. B. F. Clubb was promoted from spinnerette changer and inspector.

(Continued on next page)

13 Promoted at Lowland

(Continued from preceding page)

The Finishing appointments were effective Feb. 15. R. W. Everhart and C. F. Kuykendall were promoted from wash track operators. K. W. Clevenger was a vacuum dryer operator, and Burnett Finchum was an extractor operator. J. P. Lovell has been a department shift clerk since shortly after he was employed July 7, 1950.

The Textile foreladies are Mrs. C. J. Osborne, who was promoted from winder, effective Jan. 25; and Mrs. T. J. Goode, promoted from winder, effective Feb. 15.

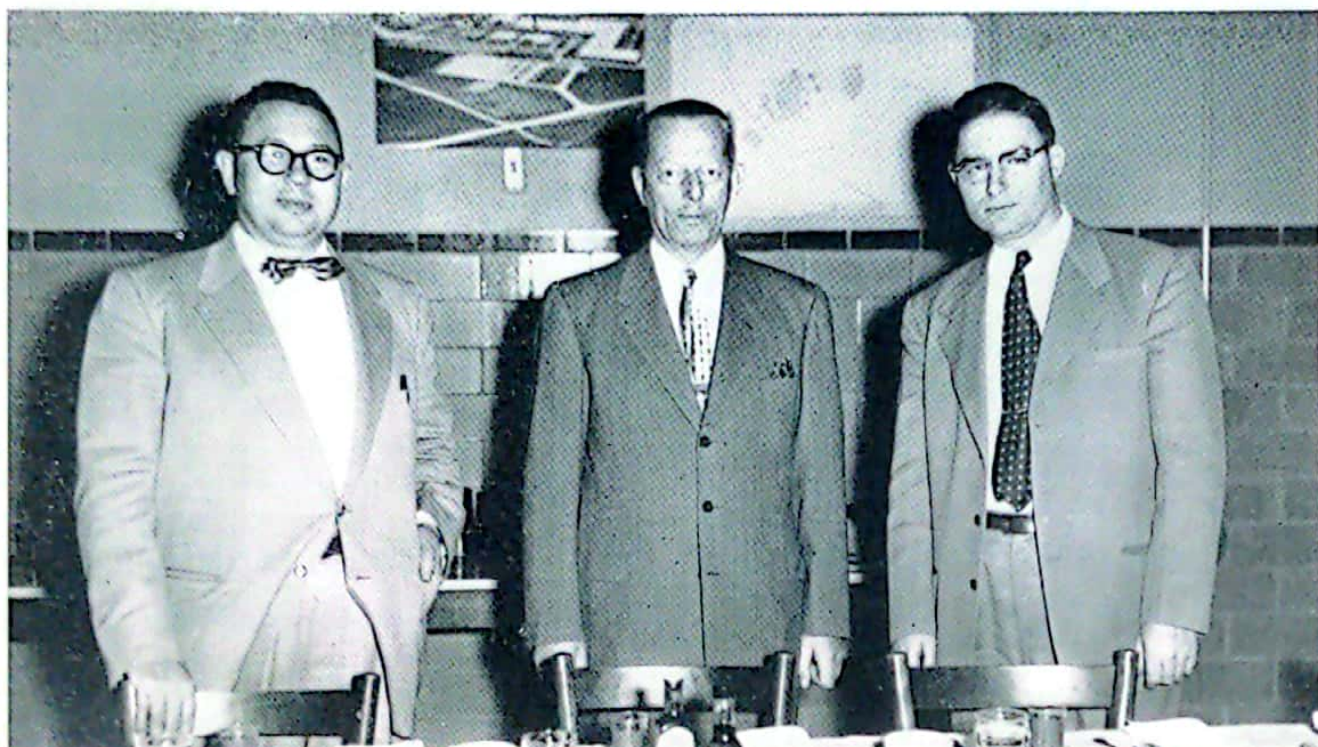
Justin H. "Jack" Turner, effective Feb. 22, was promoted from leadburner, 1st class, to assistant foreman, Leadburner Group, Sheet Met-

al and Leadburning Shop, Maintenance Section, Plant Engineering Dept. He was employed Aug. 2, 1948.

Mr. Felknor has been with the Lowland Plant since June 6, 1950; Mr. Holt, since Feb. 4, 1951; Mr. Clubb, since March 24, 1948; Mr. Everhart, since May 30, 1950; Mr. Kuykendall, since Nov. 30, 1950; Mr. Clevenger, since Sept. 13, 1951; and Mrs. Goode, since June 1, 1950.

Mr. Bivens, Mr. Lawson, Mr. Finchum, and Mrs. Osborne were employed for periods of up to two years prior to March, 1950. Currently, Mr. Bivens has been employed since Dec. 14, 1950; Mr. Lawson, since Sept. 22, 1950; Mr. Finchum, since Aug. 23, 1950; and Mrs. Osborne, since Aug. 29, 1950.

SOCIETY FOR ADVANCEMENT OF MANAGEMENT, Knoxville, Tenn. chapter, was guest of Lowland Plant management Feb. 15 for a dinner and brief tour of the plant. Outside guests represented 14 different companies in East Tennessee. There were 38 visitors from other companies in addition to Lowland hosts. Pictured here, left to right, are William B. McDonald of Carbide and Carbon Chemical Company, Oak Ridge, president of the Knoxville chapter of SAM; Lowland Plant Manager Jan Heykoop, who explained the rayon process and displayed samples of the product; and Hezz Stringfield, Jr., also of Carbide and Carbon Chemical, who is SAM chairman of plant visits.





RE-ELECTED officers to head the Lowland Credit Union in the second year of operations are, left to right: A. C. Brandl, Jr., treasurer; John T. Bible, vice president; Reno Hall, president; and Miss Maude Arwood, secretary. (See story below.)

1953 Officers Re-Elected In Lowland Credit Union

Re-election of retiring members of the board of directors, replacement of the Credit Committee's alternate member, and changes in the by-laws were accomplished at the recent first annual meeting of the Lowland Credit Union.

Retiring members were retained because the organization is new and has been operating successfully under their guidance. Same officers also were retained.

On the Credit Committee, Neal Bradshaw, welder, replaced Mrs. Deane Smith, Textile Lab, who resigned as alternate member.

Two changes were made in the by-laws—one empowering the board of directors to borrow money for the Credit Union in cases of emergency; the other changing the time

at which dividends may be declared.

Plans were laid to increase membership to 1000 during the coming year. It also was announced that at the end of 1953, the Credit Union had 690 members holding shares totaling \$59,028.43. Of these members, 252 had loans amounting to \$45,952.01. Cash in the bank totaled \$13,691.47.

Three Shift Foremanships Effected in Textile Dept.

Three shift foremanship appointments were announced last month in the Enka Plant Textile Dept.

In the Coning Section, E. E. McDowell and W. H. Ledford were named. Mr. McDowell's appointment was effective Sept. 17, 1953; Mr. Ledford's Jan. 18.

R. L. Howell was appointed in the Reeling Section, effective Jan. 18.

150 Enka Plant Employees Give During Bloodmobile Visit Feb. 11

At the Feb. 11 blood collection at the Enka Plant gym, 150 employees donated.

Eight of these qualified for Gal- lon Club membership: C. H. Brooks, Shipping; Troy Caldwell, Maintenance; Lee Greene, Research; Ellis W. Israel, Chemical; Carl Nifong, Research; Robert E. Wright, Office Service; Mrs. Johanna Vandenberg, Coning; and Raymond Queen, Maintenance.

Some employees planning to donate were rejected for one reason or another. However, their willingness to roll up their sleeves to help save another's life—and that's what counts—was appreciated just the same.

Those donating Feb. 11:

Allen, Fred P.	Spinning
Allen, Russell	Pot Spin. Maint.
Allison, Doris M.	Purchasing
Almond, R. L., Jr.	Nylon
Austin, Allen L.	Chemical Lab
Austin, Virginia	Textile Lab
Austin, W. W.	Machine Shop

Baker, Daniel N.	Chemical
Banks, Wm. H.	Research
Bradley, R. E.	Pot Spin. Maint.
Bradshaw, T. W.	General Stores
Brock, Robert W.	General Stores
Brooks, Chas H.	Fin. Prod. Stor.
Brown, J. D.	Safety
Buckner, Tennie	Spinnerette

Cagle, Bonnie	Coning
Caldwell, Myrtle C.	Coning
Caldwell, Troy W.	Gen. Mech.
Capps, Carlie W.	Cake Bleach
Carraway, R. D.	Cake Bleach
Carraway, Wm. L.	Plant Eng.
Carter, Judy M.	Spinnerette

Cassidy, W. B.	Tech. Service
Caughman, G. C.	Research
Clark, D. L.	Pot. Spin. Maint
Clark, G. C.	Pipe Shop
Cook, Margaret C.	Spinnerette
Crabtree, W. R.	Research
Crook, T. A.	Machine Shop
Curtis, Frank R.	Shipping

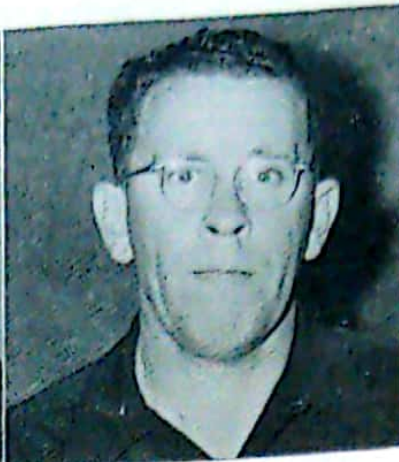
(Continued on Page 10)



JAMES E. SMITH Yard Dept. lift truck operator, last month received a new TV for his "mule." Made by Emory Gregg and Hugh Messer of Chemical and Pulp Storage, the set created quite a stir about the plant. "Smitty," weary of so much TV talk—especially from Charley Meares, Southern Railway clerk assigned to the Enka Plant—took the joke in stride . . . actually seemed rather proud of his new video.



C. C. Hughes



Kit Melton



F. G. Cabe



V. H. Cooper

C. C. Hughes Elected Head Of '54 Enka Credit Union

C. C. Hughes of the Machine Shop has been elected 1954 president of the Enka Plant Credit Union.

Mr. Hughes was chosen Jan. 29 at an officer election in which Kit Melton, Pot Spinning Maintenance, was elected vice-president; F. G. Cabe, Electric Shop, treasurer; and V. H. Cooper, Plant Accounting, secretary.

New members of the Credit Union board and committees were elected Jan. 20.

In an open meeting with about 110 Credit Union members present, T. W. Tweed, Yard Dept., and Mr. Cooper were named new directors.

Re-elected to the board were Mr. Hughes, F. R. Harrington, Power House, and J. E. Jervis, Textile Maintenance.

Retiring directors were R. J. Poore, Machine Shop, and W. J. Gaston, Nylon Dept.

Mr. Poore subsequently was named to the Credit Committee, replacing A. J. Stevens, Textile.

On the Supervisory Committee, Nathan Dempsey, Chemical, was

elected to replace T. B. Sluder, Building.

Paul M. Carlock, General Maintenance, was re-elected to the Credit Committee.

The Stork Club

Congratulations to the 26 additions to Company employee families whose births were reported since the last VOICE.

ENKA

Ben L. Morgan, Slashing, son, Ben Ray, Dec. 30.

Adriaan J. Troeleman, Technical Service, daughter, Helen Gwen, Dec. 30.

J. B. Lindsey, Spinning, son, David Stevens, Jan. 2.

E. C. Williams, Jr., Research, daughter, Donna June, Jan. 9.

T. R. Gibson, Spool Spinning Maintenance, daughter, Shirley Elizabeth, Jan. 11.

Carlos S. Boydston, Spinning, son, Michael, Jan. 12.

Albert S. Tweed, Twisting, daughter, Elizabeth Ann, Jan. 20.

W. J. Pilkinton, Spinning, son, Morris Lee, Jan. 24.

James B. Whiteside, Machine Shop, daughter, Kathy Ann, Jan. 21.

Joseph B. Warren, Spinning, daughter, Sylvia Anne, Jan. 24.

(Continued on next page)

Fred E. Lewis, Chemical Lab, son, Ricky Joe, Jan. 29.

Ellis Greene, Finishing, daughter, Deborah Elaine, Feb. 1.

J. B. Ward, Spinning, son, Eddie Terrell, Feb. 4.

Helen McElreath, Textile Lab, son, Steven Bryan, Feb. 5.

Commodore Payne, Spinning, daughter, Karen Sue, Feb. 7.

LOWLAND

T. B. Linkous, Spinning, son, David Wesley, Jan. 2.

Joseph L. Bacon, Finishing, son, Arvin Joe, Jan. 4.

James H. Taylor, Pipe Shop, daughter, Karen Sue, Jan. 5.

J. L. Capps, Chemical, daughter, Kathy Ray, Jan. 13.

Paul R. Ollis, Spinning daughter, Regenia Gail, Jan. 14.

Jack C. Woods, Spinning, son, Jackie Darrell, Jan. 19.

Harold B. Allen, Chemical, son, Kenneth Harold, Jan. 20.

J. R. Morrison, Spinning, daughter, Barbara Ann, Jan. 22.

Paul S. Dawson, Finishing, daughter, Linda Gail, Jan. 23.

Robert F. Lewis, Pipe Shop, son, Roger Franklin, Jan. 27.

Brooks M. Whitehurst, Continuous Spinning, daughter, Anita Rhoades, Jan. 28.

Ray D. Hall, Spinning, daughter, Judy Ladeen, Jan. 29.

Mack E. Hayes, Electric Shop, daughter, Teresa Ann, Jan. 30.

Four Employees Affected By Tech. Service Changes

Four employees of the Technical Service Section of the Process and Production Planning Dept. were affected by changes announced last month.

Frank McKee has been promoted to High Tenacity Sales, New York Office.

Responsibilities of R. L. Peacock

as service technician have been increased by additional duties concerning customers' processing of nylon, particularly in the spinning and weaving fields.

W. H. Boring, service technician, is assuming the additional duties formerly discharged by Mr. McKee and will deal with customers' problems pertaining to rayon weaving and related matters.

J. T. Haigler has been promoted to senior textile engineer and will handle problems regarding rayon weaving and related matters as formerly discharged by Mr. Boring.

All changes were effective Feb. 1.



LEONARD A. MOODY, mechanical engineering sophomore at Alabama Polytechnic Institute at Auburn, is presented his check for the American Enka scholarship at that school by Frank B. Leasman, Lowland supervisor of employment and training. Dean J. E. Hannum, College of Engineering, looks on. Mr. Leasman made the presentation in public ceremonies at Auburn last month.



BILL CRABTREE of the Research Dept. currently is enjoying the new Hudson Jet he won in a testimonial-writing contest last fall. Mr. Crabtree, after driving a Jet from the Asheville Hudson dealer about five miles, dashed off 25 words on what he liked about the car and its performance. The judges liked what Mr. Crabtree wrote . . . and he became one of 24 new Hudson winners throughout the United States.

Blood Donors *(Continued from Page 7)*

Darling, M. B.	Sorting	Howle, Thos. L.	Research
Davis, Raymond H.	Chemical Lab	Hughey, Dorothy	Spinnerette
Dempsey, R. N.	Chemical	Ingle, Geneva B.	Textile Lab
Dillingham, J. J.	Pipe Shop	Ingle, Hobert N.	Research
Dyer, A. B.	Carpentry	Ingram, Mildred C.	Spool Cleaning
Eller, Clarence L.	Shipping	Ingram, Thos. J.	Chemical
Elliott, Earl H.	Plant Eng.	Israel, Ellis W.	Chemical
Ezell, W. A.	Plant Eng.	Jenkins, Wm. R.	Textile Maint.
Fowler, Eva	Textile Lab	Jolliff, John K.	Plant Ind. Eng.
Fowler, Ross R.	Textile Lab	Jones, Fred W.	Building
Fox, Ellis W.	Twisting	Jones, Mark M.	Textile
Gosnell, Fred	Machine Shop	Killian, Lamar	Cake Bleach
Green, Van H.	Cake Bleach	King, T. L.	Sp. Spin. Maint.
Greene, David W.	Plant Ind. Eng.	Knight, Virginia	Office Service
Guthrie, David H.	Research	Lafflen, T. E.	Pot Spin.
Guthrie, Roger T.	Research	Lamprinakos, G. J.	Proc. & Prod. Pl.
Hager, Gordon V.	Ass't Treas.	Lawrence, Jack	Research
Harris, R. S.	Textile Maint.	Lewis, O. R.	Machine Shop
Hawkins, E. P.	Pot Spin. Ext.	Lindsley, Chas H.	Research
Haynie, C. A.	Machine Shop	Lloyd, John M.	General Eng.
Haynes, Eugene	Char Force	Love, Andrew D.	Research
Henderson, H. J.	Shipping	Lovingood, N. L.	Machine Shop
Hoglen, N.	Spool Spin.	Maney, George D.	Gen. Stores
Holcombe, A. W.	Machine Shop		
Holcombe, J. W. Jr.	Chemical		

Mastin, Henry Lee
 Matheson, R. E.
 McClain, John L.
 McKinney, P. S.
 Mease, Weldon
 Mehaffey, Clara
 Mehaffey, Vivian
 Melton, R. H.
 Moore, C. W.
 Moore, Loren L.
 Moore, Wiley M.
 Morgan, Doris W.
 Morgan, Marg. H.
 Morgan, Webb
 Morrow, Bennie J.
 Morrow, Jack D.
 Murray, Myrtle
 Muse, Edith
 Muse, Ethel

Newcombe, C. C.
 Nichols, Maye
 Nifong, Carl E.
 Norris, Troy T.

Osborne, F. W.

Parker, Bill C.
 Parks, Ross L.
 Parris, Wylma H.
 Peebles, Wm. Alex.
 Peterson, J. W.
 Pickens, J. R.
 Pinkerton, A. J.
 Pitts, Chas. G.
 Pollard, Robert, Jr.
 Pope, Catherine
 Posey, N. W.
 Praytor, Nixon R.
 Presnell, Carl, Jr.
 Prickett, Jack

Queen, R. H.

Randall, Rex D.
 Reed, Buster B.
 Reed, Haldee Lee
 Reeves, Blanche
 Reynolds, Lucile
 Robinson, B. H.
 Rogers, Willa Mae

Salley, D. C.
 Sams, S. Howell
 Sentelle, Horace
 Silvers, Catherine
 Smith, R. W., Jr.
 Smith, Wennonah

Finishing
 Safety
 Chemical
 Plant Ind. Eng.
 Machine Shop
 Purchasing
 Textile
 Pot Spin. Maint
 Nylon
 Machine Shop
 Machine Shop
 Spinnerette
 Cake Bleach
 Pot Spinn.
 Inst. Shop
 Cake Bleach
 Spinnerette
 Spinnerette
 Slashing

Research
 Textile
 Research
 Spool Spin.

Plant Eng.

Pot Spin.
 Nylon
 Textile Lab
 Retired
 Research
 Gen. Stores
 Carpentry
 Office Service
 General Eng.
 Schedule
 Machine Shop
 Cake Bleach
 Research
 Gen. Ind. Rel.

Pipe Shop

Plant Ind. Eng.
 Cake Bleach
 Tech. Service
 Spinnerette
 Sorting
 Pipe Shop
 Sp. Cleaning

General Eng.
 Chemical
 Nylon
 Spinnerette
 Slashing
 Sorting

Stewart, E. J.
 Stockton, Fred B.
 Stockton, W. H.
 Stroupe, Stacy C.

Taylor, Luther C.
 Thomas, Harry J.
 Thompson, E. P.
 Thompson, Rex
 Troeleman, A. J.

Vanderbroek, J.

Walker, Wm. V.
 Warren, W. H.
 Wells, John L.
 Williams, John
 Williams, J. M.
 Wilson, A. W.
 Wilson, Ruby H.
 Wright, J. C.
 Wright, Robert E.

Young, Elridge

Machine Shop
 Salvage
 Sp. Spin. Maint.
 Spool Spin.

Research
 Controller's
 Pot Spin.
 Pot Spin.
 Tech. Service

Twisting

Plant Eng.
 Chemical
 Gen. Ind. Rel.
 Char Force
 Machine Shop
 Electric Shop
 Coning
 Textile Maint.
 Office Service

Machine Shop



The

**TRADIN'
POST**

For Sale

Used Well Tile. 8 pieces, 24" diameter, 2' long. P. B. Glenn, Enka Plant
 Finishing; Arden, Rt. 1.

To Swap

Lady's Wristwatch. For a man's good wristwatch or what have you? This watch is Swiss-made, 17-jewel, with 18 k. gold case. Troy Norris, Enka Plant "B" Shift Spool Spinning.

Card of Thanks

To Enka Employees and Friends:
 We deeply appreciate the many acts of kindness shown us in the recent loss of our loving father and husband.

Mrs. Flora Pearson and children.

the future of RAYON

BY AMERICAN ENKA'S RESEARCH DEPT.

Since the future of rayon is important to all American Enka employees, the VOICE last month asked the Company's Research Dept. for a peek at things to come. Here's the report.

THIS certainly is an unsafe time to predict the fate of any individual fiber for the next 10, 20, or 30 years.

However, it may be interesting to consider the prediction of former President Truman's Materials Policy Commission of 1952 (see table, page 15) as cited in the current *Enka and Breda Revue*.

Of the four main fibers—cotton, wool, rayon, and synthetics—it predicts that in 1975 in the United States the demand for rayon almost will double, cotton will increase slightly, and wool will experience a small drop. Demand for synthetics will increase tremendously but still will fall short of that for rayon.

Hence, according to this forecast, man-made yarns and fibers will in the future, as they have in the past 20 years, supply to a very large extent the increased demand for textile material.

Within the lifetime of the "older hands" of the rayon industry, many significant changes have occurred. Since its birth the industry has grown to supply 17.5 per cent of all textile fibers produced (1953). Rayon over these years continually has dropped in price—from the most expensive fiber in the late 1920s to the point of now being cheaper than cotton. It displaced cotton completely as an automobile tire cord and developed a definite end pattern in the textile field upon which no other fiber seriously encroached for years.

New Standards Set

However, within recent years, new fibers with a great diversity of characteristics have appeared and set entirely new standards of performance. This—to say the least—has shifted the whole end-use pattern. And it has posed the question: Will rayon lose in the shuffle . . . or will it adapt itself to command an even greater respect as a textile fiber?

For a fiber to be and continue to be competitive, it must be priced reasonably, be available, have an aesthetic appeal, and, above all, be durable



in any application. Failure in the latter requirement is fatal for a specific end-use, and, if experienced frequently, will ruin a fiber's reputation.

Standards also may change with the introduction of new fibers—causing a currently satisfactory fiber to lose its popularity. A typical example is nylon's displacement of silk in women's hose.

However, as long as a fiber is outstanding in any one of the requirements above, the possibility always exists of sufficiently improving the other requirements to the extent of new and broader application.

For instance, a moderate improvement in appearance or serviceability may do wonders for an inherently cheap fiber. Witness what the "new look" has done for cotton in the women's dress field. It literally has brought it out of the kitchen into the parlor.

Rayon, even now a relatively new fiber, developed rapidly through the 1920s and '30s and was displacing the natural fibers at an ever-increasing rate. Later, however, when the novel properties of newer synthetics were spotlighted, rayon suddenly lost some of its glamor.

Standards changed overnight—almost as drastically as the standard for explosives with the first atomic blast. And it is precisely this shuffle of standards that challenges rayon producers today . . . challenges them to accommodate the demands of the times and to penetrate new branches of the textile industry along with the newer man-made fibers.

Rayon's Assets, Liabilities

What about rayon's assets and liabilities? How well does it comply with the four necessary requirements of a competitive fiber?

It meets the first two admirably—it is the cheapest fiber on today's market and is in sufficient supply to meet current demands.

It has outstanding dyeing characteristics and can be given varying degrees of luster, ranging from pure matt to an almost metallic sheen.

It is moisture-absorbing and its surface can be changed to give it an appealing feel or "hand." Thus, basically, it enjoys aesthetic appeal.

But how about its durability toward wear and maintenance? This is the area where standards have changed . . . and where rayon must meet the challenge of newer fibers.

Rayon established and for years maintained a definite end-use pattern in lining, crepes, taffetas, men's half-hose, etc. It would seem that the future of rayon lies in:

1. Maintaining as much of this established market as possible
2. Blending with other fibers
3. Improving its properties so it can develop new end-uses

In those present end-uses where laundering is not too important, rayon should maintain its place on the basis of price, processing qualities, dyeing, appearance, and service. However, the whims of fashion may change an

apparently stable picture. This is the only apparent reason for the virtual disappearance of crepes from the present market.

Textile research already has shown that the new and old fibers can compliment one another admirably in blends. Rayon would seem to be the almost perfect fiber for blending, because it has so much to lend to the costly, moisture-insensitive synthetics. It can lend worthwhile economy and add better processing, better dyeing, better hand, and, often, novel and better appearance. Textile research certainly will capitalize fully on these possibilities.

The third approach—the development of new end-uses—is entirely up to the ingenuity of research in improving the physical and chemical characteristics of rayon fibers and fabrics. Possibilities are great and prospects appear bright.

CONSUMPTION OF COTTON, WOOL, RAYON, AND SYNTHETICS AS PERCENTAGE OF TOTAL CONSUMPTION				
WORLD	COTTON	WOOL	RAYON	SYNTHETICS
1927-29	82.3	15.2	2.5	
1937-39	77.0	12.4	10.6	
1947-49	73.0	12.9	13.6	0.5
1950-52	69.8	11.5	17.5	1.2
USA -- 1950-52	69.9	8.0	19.1	3.0
ESTIMATE, USA -- 1975	52.9	5.9	23.5	17.7

FROM MATERIAL IN ENKA AND BRED
RAYON REVUE

A good example of what has been done to extend the use of rayon is American Enka's recently developed Jetspun pigment-dyed yarns. Brighter and more evenly and permanently dyed yarns by the producer have created new end-uses, particularly for off-loom fabrics . . . and undoubtedly will lead to more and more new uses.

After-treatment of fabrics to render them more resistant to swelling and shrinkage has gone a long way toward making rayon garments washable and gives good promise of leading to complete washability. Modification of the fiber to give better wet strength and less swelling could open up large new markets in men's dress shirts, sheets, washable uniforms, workclothes, and many other new end-use products.

Producers certainly see the necessity of improving rayon fibers to tap these potential markets. With the vast resources of research at their command, the future should offer great possibilities for further growth.



LEGAL DISTILLING is what Miss Wanda Campbell is doing here. Only in this case it isn't alcohol she's trying to manufacture. She is purifying a solvent used in oil extraction. And the chemical is ethylene dichloride.



INCLINED PLANE SCOTT Testers are operated here by Miss Charlotte Howell and Miss Rubie Southerland. These testing devices determine cord strength.

Lowland Sports New Textile Lab

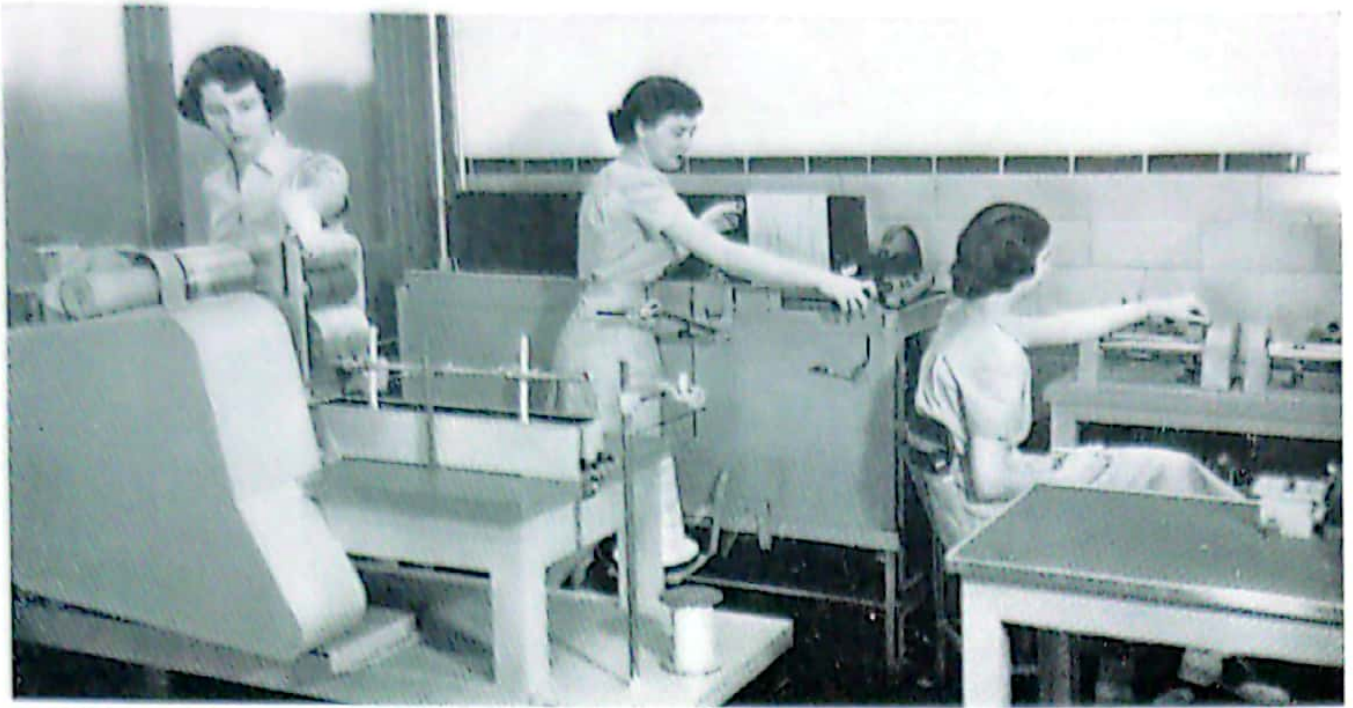
The VOICE visits a brand-new laboratory—one wearing the coveted 'new look'

THE Lowland Textile Lab recently moved into new quarters—where it has a cleaner, greatly-expanded working area. Many of its employees say it's like a dream come true.

Construction of the addition was begun last April 17. Finishing touches were made, and the Dye Lab section of the unit was re-located before Christmas.

The remainder of the Lab started moving Jan. 4. Two weeks later most of the Textile Lab was in good operating condition.

Come with us now as we inspect this "new look laboratory." (Also see back cover.)



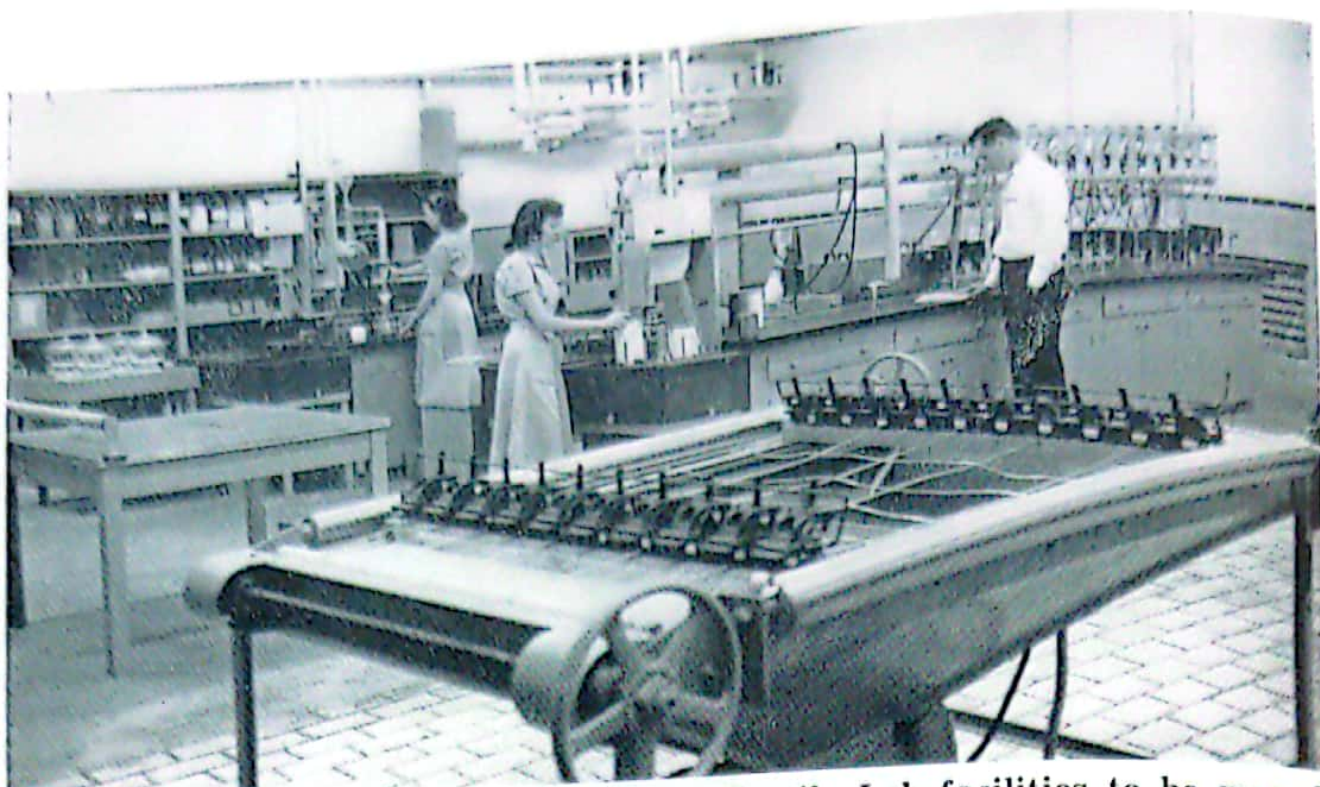
MRS. JAMES CURETON operates a laboratory slasher, **Miss Faye Mahan** a scriplane winder, and **Mrs. J. K. Stroud** the Shirley Shrinkage Machine.



MISS JO ANN HARRISON is preparing a sample for knitting, and **Mrs. Carroll Quinton** is operating the knitting machine. Tubes knit on this machine are used for dye tests.



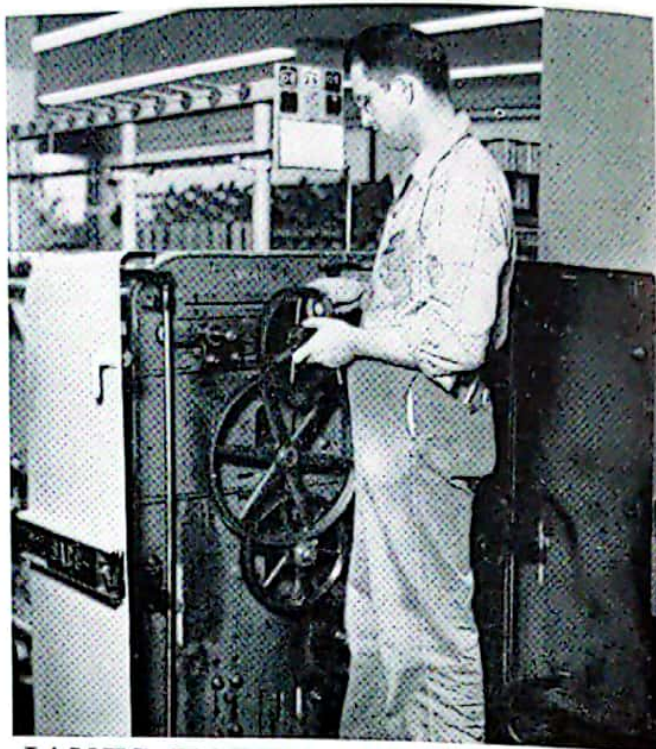
CLOTH is inspected by **J. D. W. Hubbeling**, chief chemist, and Lab Manager **W. H. Patrick, Jr.** on an apparatus in a room boasting shadowless lighting.



DYE LABORATORY, first portion of the Textile Lab facilities to be moved, boasts special brick drainage facilities. Personnel operating this equipment are Mrs. C. H. Jones and Miss Wanda Campbell. W. G. Clark is a Laboratory technical assistant.



STANDARD LABORATORY procedure are discussed with Mrs. Norman Trent by Miss Deane Smith, Textile Lab forelady. Mrs. Trent also is pictured on the back cover of this issue.



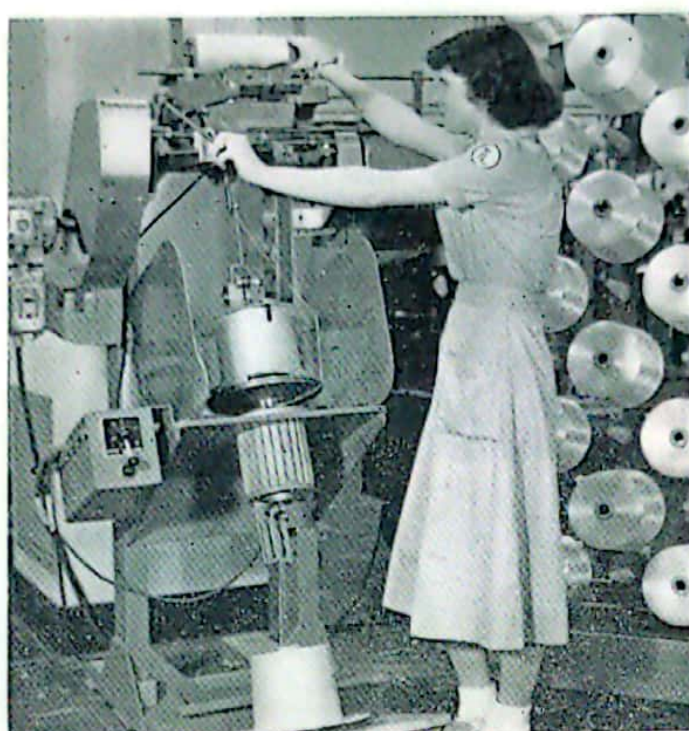
JAMES HART is a textile machine fixer in the Plant Engineering Dept. but is permanently assigned to the Lab to maintain its many machines. Here he is changing gears on the Saco-Lowell Twister.



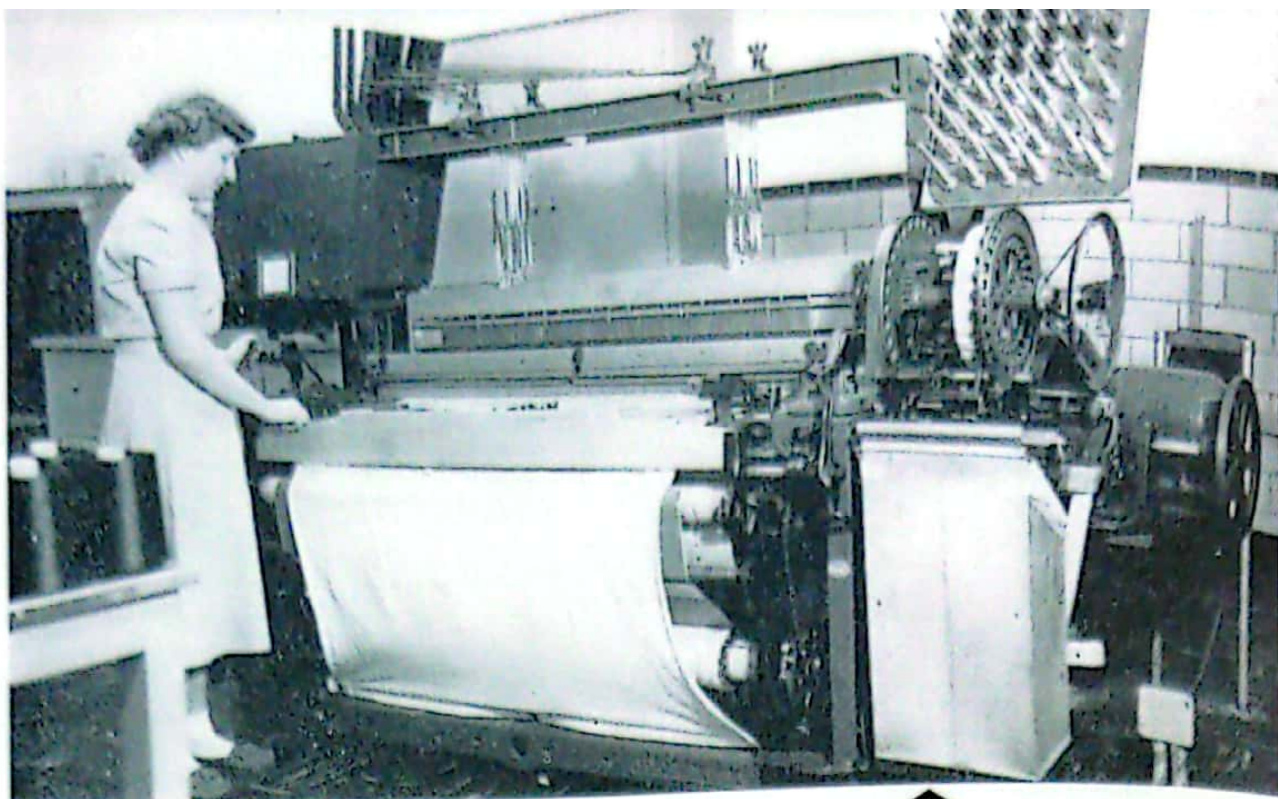
MRS. EWING BUELL and **Mrs. C. E. Reneau** operate pendulum-type strength testers, and **Miss Jean Long** is determining the number of turns per inch in twisted yarn.



MISS MARY SKELTON threads the **Atwood Winder** which will wind yarn onto spools from cakes.



NEWEST MACHINE addition in the **Textile Lab** is the **Beyer Spindle**. It forms two-ply cord in one operation.

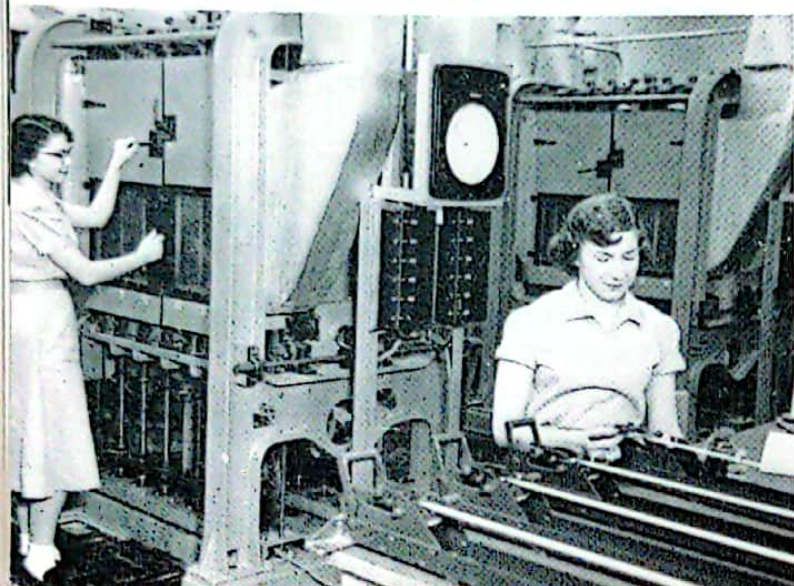


WEAVING CLOTH for inspection is Mrs. Carroll Shockley.

W. G. CLARK and J. R. Graham are technicians. Mr. Clark's work is largely confined to the Dye Lab, and Mr. Graham's to the remainder of the Laboratory area.

BELOW LEFT: U. S. Rubber Fatigue machines are used to test yarn samples for deterioration after repeated stress. Mrs. R. R. Herndon is preparing a sample, while Miss Betty Jean Buckner loads one of the machines.

PHOTOGRAPHER CLAUDE HARTMAN looks up from the enlarger in his new dark room. This installation also provides new studio facilities.





MISS BOBBIE JANE QUINTON and Miss Marvella Matheny both operate the Twister. This will put enough turns in the spun yarn to make a cord.

OIL CONTENT OF YARN is determined by use of this apparatus. Mrs. Clarence H. Jones is adding an acid indicator.



TABLES, GRAPHS, REPORTS are the daily task of this office crew—Mrs. O. W. Burnette, Mrs. John Harrison, Mrs. Earl Canter, and Mrs. James Douthat.





IN THEIR
Textile Lab
photographer
view of the n



IN THEIR NEW HOME—Here the Textile Lab team assembles as our photographer shoots an overall interior view of the new quarters.



DUNEAN'S DYNAMOS walked off with championship laurels in the sixth annual Dixie League tournament Feb. 18, 19, and 20 at the Enka gym. Front row, left to right, are: Bomar Keller, Tex Ritter, Jim Slaughter, Bud Granger, and Larry Ashley. Top: Bobby Stowe, Carl Greene, Coach Ward Williams, Alvin LaBoone, and Melvin Bell.

● SPORTS & RECREATION

Dunean Sweeps Dixie League Honors With 74-62 Tourney Win Over Pelzer

Dunean's racehorse basketballers, first team to go through the Dixie Basketball League season undefeated, made a clean sweep of the league's 1953-54 honors by winning over the Pelzer Bears, 74-62, in the finals of the sixth annual loop tourney played at Enka Feb. 18, 19, and 20.

The Dynamos, regarded as the

strongest team in league history, won 10 in a row league-wise during the regular season, and their tournament victory over Pelzer was their 30th consecutive win of the season.

Dunean drew an opening round bye, and a 79-66 semifinals win over Monaghan sent the Dynamos against Earl Wooten and Company. Pelzer,

also with an opening round bye, tripped Enka, 86-78, to gain the finals.

The finals provided a bitterly fought contest with rough, bruising play holding the score down. Finally, in the closing minutes, the tension mounted and several players "squared-off." Duncan previously had beaten Pelzer four times this season.

The Rayonites were never better in their opening round game with Piedmont which they won, 104-76. But the next night a red-hot Pelzer club took a 49-33 halftime lead, and the Rayonites had to put up a good last half to make a close game of it. The Rayonites managed to take a 74-72 lead with four minutes to go but couldn't hold as Wooten came through with the pressure on.

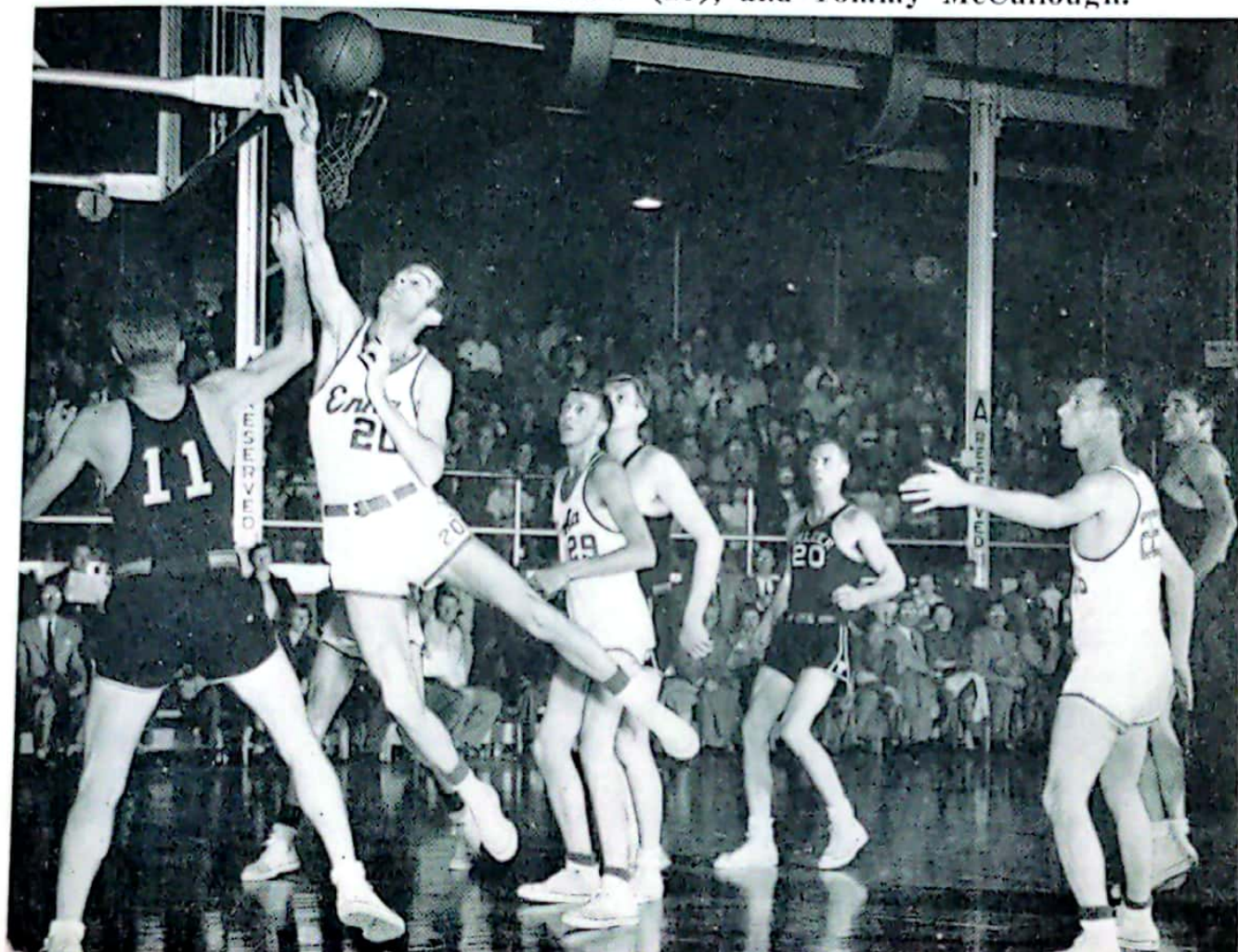
The All-Tournament team, selected by league coaches, included Ward Williams, Jim Slaughter, and Bobby Stowe of the championship team, and Truman Hill and Wooten of Pelzer.

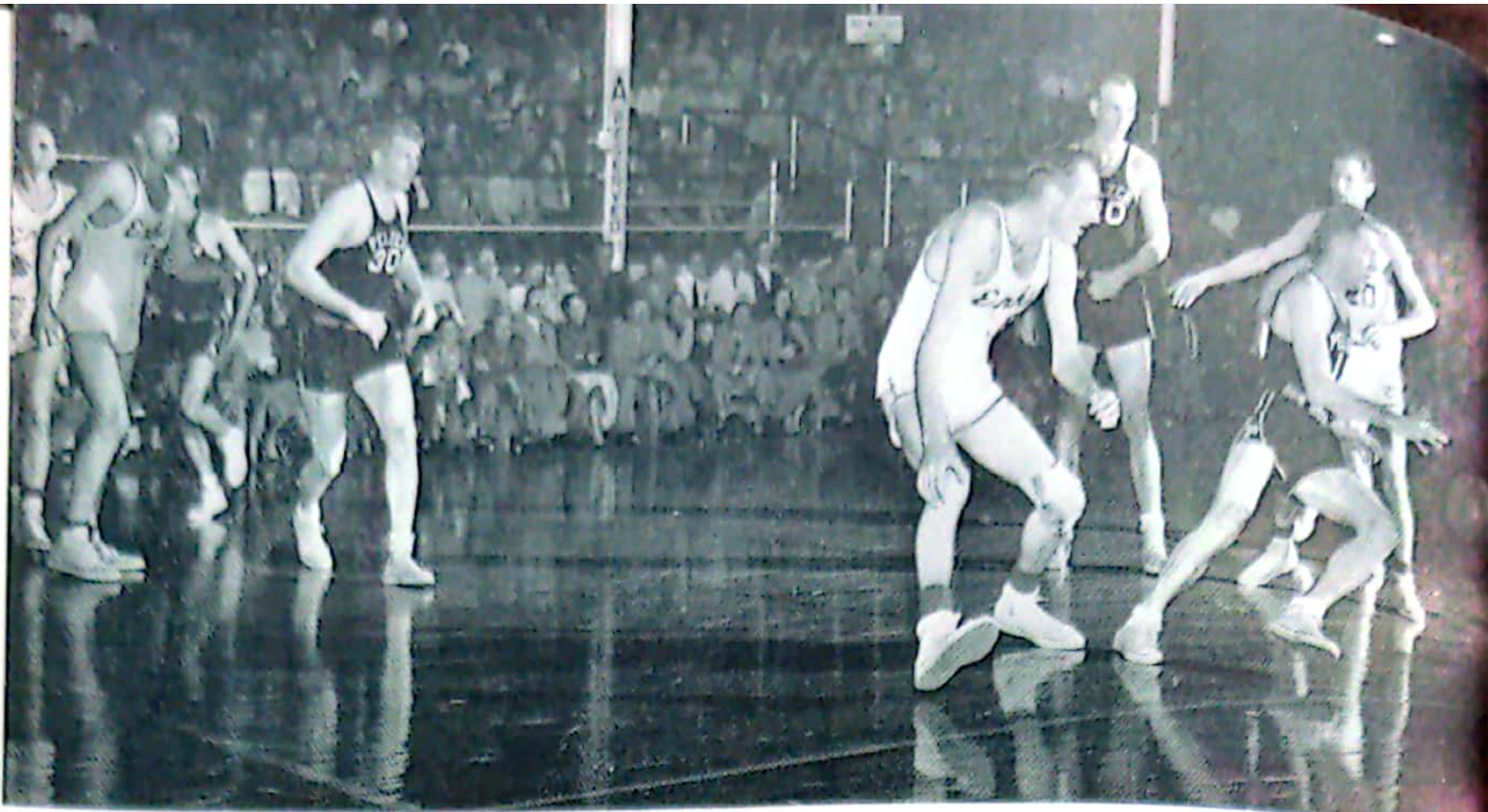
Rayonites End Cage Season At Southern Textile Tourney

Enka's Rayonites ended their current cage campaign at the 31st annual Southern Textile Tournament at Greenville, S. C., March 3-6.

In addition to Dixie Leaguers Duncan, Pelzer, Monaghan, Enka, Piedmont, and Greer Victor, taking part were Woodside Mills of Greenville and the Peerless Woolens of Chattanooga.

NED STRAEHLA, Rayonite guard, jumps to break up a shot fired by Pelzer's Earl Wooten (11). The Dixie League tournament victory for Pelzer was the third of the season over Enka. Other players are: Smith Langdon (29), George Lancaster (22), John McGraw (20), and Tommy McCullough.





PELZER'S BEARS dropped the Rayonites from tourney play in the semi-finals, winning 86-78. Earl Wooten (dribbling ball) paced the Bears to the victory. Rayonites shown, left to right, are: Jim Patton, Smith Langdon, Deran Walters, and Ned Straehla. Bears are Tommy McCullough (21), Truman Hill (30), John McGraw (20), and Wooten.

Sand Hill Comets Nip Cats To Win Blue Ridge Tourney

An underdog Sand Hill Comet team that had lost twice during the regular season to Hendersonville, overcame an eight-point halftime deficit and won the 15th annual Blue Ridge Conference tournament crown from the Bearcats, 52-50, in the finals.

Played at the Enka gym Feb. 25, 26, and 27 with eight teams taking part, the tourney for the first time in history had a double overtime championship game.

The Comets and Cats were tied 45-all after the regulation game and 50-all after the first overtime. Big Bob Swayngim's drive-in bucket in the sudden death second overtime brought the Comets their second con-

ference pennant in two years. Last year they won it from the Bearcats, bringing to an end a five-year reign of Hendersonville championships.

Besides Swayngim, Comet starters included Rex and Larry Davis, Joe Sprouse, and Dan Miller. Rex Davis, a forward, played one of the finest games of his career.

Sand Hill won over Ben Lippen, 75-55, in opening play and eliminated Asheville School, another team that had beaten them twice during the regular season, 48-45, in semifinals.

Other teams taking part included Brevard, Mars Hill, Christ School, and Biltmore. Hendersonville beat Christ School and Biltmore to reach the finals.

Bob Swayngim, Rex Davis, and Joe Sprouse made the honor squad.

Enka's Men Maintain 4th, Women 2nd in Bowling

Enka's men's team of the WNC League held its fourth place position during last month. The club has won $37\frac{1}{2}$ and lost $28\frac{1}{2}$. Pace-setting Champion "Y" has a 39-24 record.

The girls team, competing in the Asheville Women's League, holds down second place with 41 wins and 25 losses, four games behind first place Allen Transfer.

Arthur Henderson's 184 average leads the men's team and ranks eighth in the league.



"B" SHIFT SPINNING tops league bowling teams in second round action. Its record is $33\frac{1}{2}$ - $6\frac{1}{2}$. Standing, left to right, are: George Mal-lonee, Hobart Hyatt, and Frank Lit-trell. Bottom: Buck Gudger and Bob Steelman. The team also won first round honors.



VETERAN bowlers form the General Mechanics team of the Plant Bowling League. They presently are battling for a top division berth. Standing, left to right, are: Arnold Holcombe, Earl Calvin, and Charley Sanford. Bottom: Paul Carlock and Frank Godfrey.

'B' Shift Spinners Poised To Cop 2nd Round Honors

"B" Shift Spinning, winner of the first round of the Plant Bowling League, has all but wrapped up honors in second round play. With only one more week of action remaining in the second round, "B" Shift has a $2\frac{1}{2}$ -game-lead and only one more match. Its record is $33\frac{1}{2}$ - $6\frac{1}{2}$.

The third round, a short five-week run, will open March 8.

Spinning-Safety is running a close second with a 31-9 record. Industrial Engineers are 28-12, and Drafting, 25-15.

Rounding out the top division are "C" Shift Chemical, 21-19, and Electric Shop, 18-22.

Leading the Big Ten is Walter Sanford with a 178 average. Lane King follows with 172, Othel Brooks with 171, Howard Perritts, 168, and Bob Steelman, 167. Frank Godfrey also holds a 167 average.



UPPER HOMINY, left, is champion of the Teen-Age Boys basketball league. Their final record was 11-3. Bottom row, left to right, are: Bill Clontz, captain; Scott Warren, and Allen Penner. Top: Virgil Perritts, Billy Foster, Joe Warren, and Luther Parris. Pole Creek, right, finished second with 9-5. Standing, left to right, are: Willis Herron, Harold Morgan, Keith McCall, Coach Howard Morgan, Ralph King, Charles White, and Richard Hendrix. Kneeling: Bobby Hawkins and Tom Rutherford.

Upper Hominy Cage Teams Win 1953-54 Junior Titles

Regular season play in the four Enka gym leagues for boys and girls ended March 1 with Upper Hominy teams in both the Teen-Age Boys and Midget Boys League winning championships.

Upper Hominy's Teen-Age boys won the race with an 11-3 record, finishing ahead of Pole Creek, 9-5. The Upper Hominy Midgets completed its season with a 12-2 record. Candler Heights was the runner-up with 10-2.

The undefeated Pole Creek girls, 13-0, handily won the Midget Girls League. Pisgah was next best with 11-2.

The Teen-Age Girls League race ended in a tie between Pole Creek and Beaverdam, both with 8-5. A playoff game will come off March 10.

Tournaments for the four leagues will begin the week of March 8. Enka will present awards to winning teams and runners-up.

FINAL STANDINGS Midget Boys League

	Won	Lost
Upper Hominy	12	2
Candler Heights	10	4
Brooks Cove	9	5
Beaverdam	5	9
Starnes Cove	3	11
Village	3	11

Teen-Age Boys League

Upper Hominy	11	3
Pole Creek	9	5
Beaverdam	7	7
Reeves Cove	6	8
Candler Heights	6	8
Village	3	11

Midget Girls League

Pole Creek	13	0
Pisgah	11	2
South Hominy	9	3
Reeves Cove	6	6
Village	5	8
Upper Hominy	4	9
Beaverdam	2	11
Candler Heights	1	12

Teen-Age Girls League

Pole Creek	8	5
Beaverdam	8	5
Reeves Cove	7	6
Village	3	10

District 4 Playoffs Set

The District 4 Class A playoffs will be played March 11, 12, and 13 at the Enka gym with eight teams taking part. District 4 embraces Western North Carolina counties.

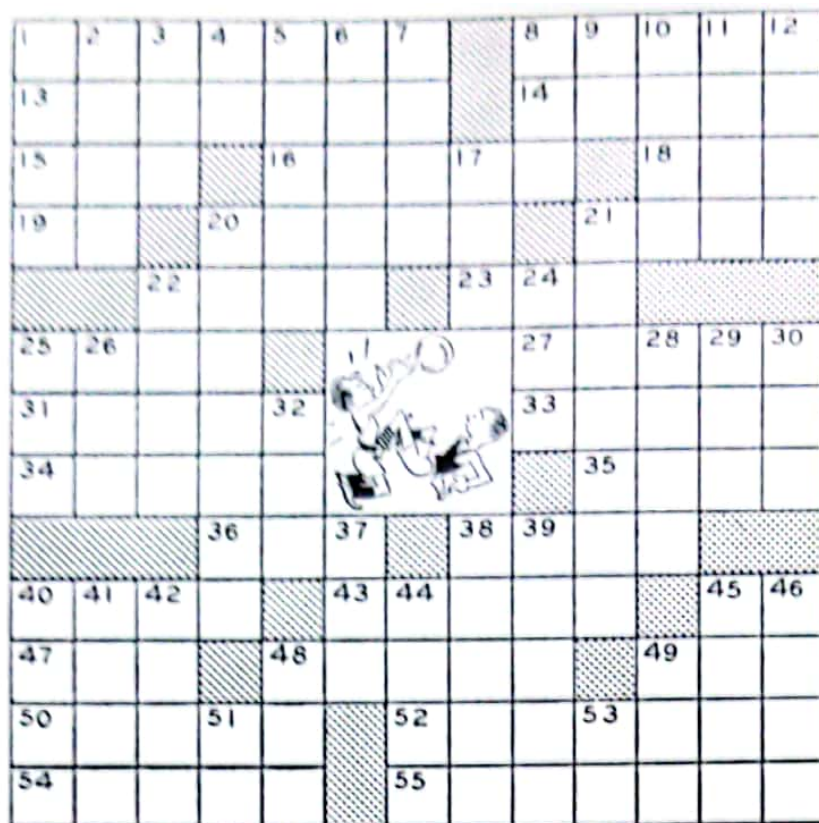
Plant Puzzler

ACROSS

1. The Rayonites are basketball_____
8. Sam Patton's job
13. Dusty Rhodes' job
14. Taped before the game
15. Post-game pleasure
16. Defensive position
18. Electrified partical
19. Western state (ab.)
20. Imperious
21. Insects
22. Sensible
23. Finish
25. Rooters
27. Basketball game
31. Draw out of
33. Settee
34. More recent
35. A month (ab.)
36. Beverage
38. At what time
40. Basketball play
43. Lance
45. For example (Latin, ab.)
47. Bore
48. Seat
49. Enka parent company

Last Month's Answer

A	P	R	O	N	S	L	E	E	V	E	S
B	R	A	D	Y	T	E	X	T	I	L	E
L	O	T	L	E	A	D	C	L	A	W	
E	W	E	O	R	I	G	H	E	N	S	
			S	N	A	R	E	S			
A	M	A	H				A	I	D	E	D
S	A	M	O	A			G	L	O	V	E
K	R	I	E	K			L	E	A	N	
			U	S	H	E	R	S			
C	A	K	E	P	E	R	I	R	A	G	
A	R	I	D	O	A	R	S	O	B	I	
R	E	S	I	N	O	L	K	I	S	E	R
P	A	S	T	E	L	S	S	T	A	L	L



50. Basketball arena
 52. Roy ———, basketball player
 54. Joe ———, referee
 55. Report any change in this promptly to your supervisor
 22. Winter weather phenomnom
 24. ——— Strachla, Rayonite
 25. Marsh
 26. Hail
 28. Tied
 29. Snooze
 30. Explosive
 32. Before
 37. Residue of combustion
 38. Eerie
 39. Ran like a rabbit
 40. Set the speed
 41. Absent without leave
 42. Thick place in yarn
 44. Daddy
 45. Makes do
 46. Fellows
 48. Cotangent (ab.)
 49. Beverage
 51. Concerning
 53. Senior (ab.)
- (Answer next month)

Modern Research Kills Ancient Malady

Good news for American Enka employees and their families who may be 'dreading' this year's vacation trip because of susceptibility to 'motion sickness' . . .



MOTION SICKNESS has been a familiar discomfort through the ages. Desert explorers and soldiers knew of the ill-effects caused by the lurching gait of the camel, and ocean voyagers are well aware of seasickness.

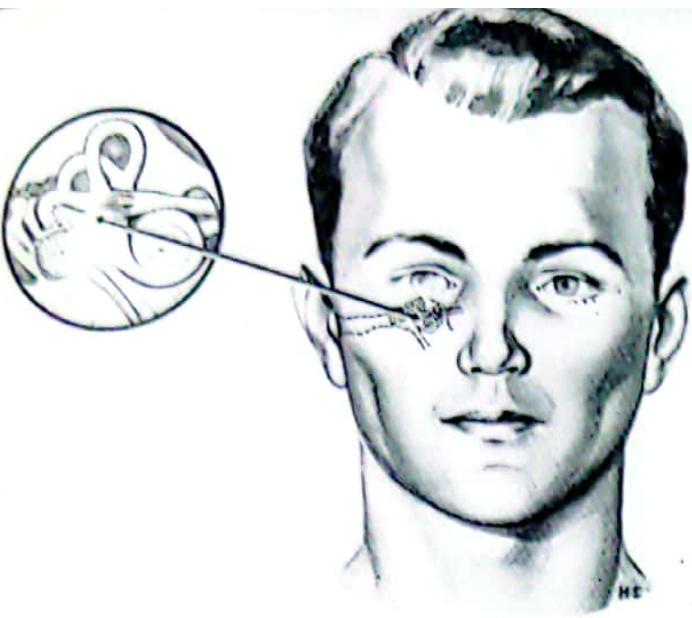
THOUSANDS of people—including many employees of American Enka—have started on vacation trips with high hopes for a wonderful experience . . . only to end up hanging over ship rails or out of automobile windows within a few hours. Business men have arrived at important appointments, after traveling by plane or train, rendered ineffective by a common malady known through the

ages—motion sickness.

This awful feeling in the pit of the stomach, accompanied by pallor, cold sweating, and salivation, has been known familiarly as seasickness probably since the time that Noah launched his ark.

Though desert explorers knew of a form of seasickness caused by the lurching gait of the camel, medicine did not recognize that vehicles other than ships could cause illness through motion.

It was not until 1881 that doctors coined the term "motion sickness" to cover all forms of transportation. Train, car, and air sickness have since



BONY LABYRINTH of the inner ear (inset), a structure about the size of a small key and like a pretzel in shape, is the body's organ that controls balance. When it is disturbed, the result is nausea and a panicked stomach—or motion sickness.

become too well-known.
Engineers realized the problem a century ago. They built a steamer that had passenger cabins hung on brackets. Through a remarkable mechanism which was manipulated by the crew when the waters were rough, the cabins were swung to offset the roll of the vessel.

Since then engineers have tried out scores of other ingenious devices and arrangements intended to free travelers from the hazards of motion sickness. Many a jolt and twist were eliminated, but not the main problem.

But, where the engineers have failed, the chemical researcher has found drugs that make the passenger himself proof against that queasy feeling caused by motion. A new and harmless drug—called Bonamine—treats the old-fashioned body so it can ride pleasantly in new conveyances.

Few people realize how extensive

susceptibility to motion sickness is. According to recent careful studies of large numbers of people, really rough travel will make nine of 10 persons ill and moderately turbulent motion upsets 10 to 30 per cent of inexperienced travelers.

For all our long acquaintance with the malady, it was not until World War II that the symptoms of motion sickness were defined and the causes investigated.

One of the few facts previously known about motion sickness was that individuals suffering from deafness due to damage to the nerves of the

(Continued on next page)

CLINICAL TESTS were made to examine the effects of motion on the body and the results of the new drug. The young lady, below, is whirled in a special chair for a fixed period of time and will try to rise and stand with her feet together. A doctor will check the time required for her to regain balance with and without Bonamine.





MOTION SICKNESS would be a serious handicap to paratroopers during a jump operation such as this one. Air Force doctors tested Bonamine on hundreds of soldiers, and it proved to be the only drug that gave 24-hour protection with a single dose.

inner ear are, for the most part, immune to motion illness. This led to the discovery that the bony labyrinth of the inner ear—a structure about the size of a small key and like a 3D pretzel in shape—is involved. Exactly what part of the labyrinth is involved or why a disturbance should result in panic of the stomach is still obscure.

Nearly everyone knows about the old lady who, as a result of her fears, became seasick before her ship left the dock. Careful study has convinced most investigators, however, that psychological factors have little part in motion illness.

The person who gets sick as soon

as he or she steps aboard the ship could be extremely sensitive to the slight movement evidenced by any boat tied up at a pier. It is significant that very few people, if any at all, get motion sick while sitting in a standing plane, car, or train before a trip.

In the tests conducted by the armed forces, hundreds of dogs (they are as susceptible to motion sickness as man) and thousands of military personnel were jounced in swings, whirled in chairs, flown through turbulent air, and tossed about in rough water. All of this mayhem showed at long last why engineers have been unable to prevent motion sickness.

There are four major motions of ships, planes and other vehicles: roll, pitch (rock back and forth), scend (rising and falling), and yaw (twisting motion). Roll can be somewhat controlled, but unfortunately, it is the least important factor. The villians are pitch, scend, and yaw—and none of these can be easily controlled. For example, to prevent pitching, ships would have to be long enough to span three waves—a matter of 1500 feet or more. Therefore, the passenger, not the vehicle, must be treated if motion sickness is to be avoided.

The folklore of travel is rich in reported remedies for motion sickness. Treatments ran the gamut from dosages of raw pork, horseradish soup, red herrings, and sardines to breathing in when the ship rose and exhaling when it fell (or vice versa). Other suggestions included a sedative which simply put the victim beyond pain, or the sailor's traditional treatment—"half-an-hour of rest under a live oak tree."

During World War II, one of the experimental drugs was used to get troops across the ocean and over the channel to Normandy. Many soldiers arrived still in possession of their dinners and spirits, but many others could hardly stand, much less fight.

Armed Forces doctors have been highly concerned with this saboteur of their soldiers' fighting ability and, when a unique new motion sickness preventative called Bonamine was developed, they were highly interested.

The new agent was among 23 possible motion sickness drugs given a systematic and vigorous series of tests by a team of U. S. Air Force and

Navy investigators under Maj. Herman T. Chinn. Bonamine was found to be the only drug to give at least 24-hour protection against air and seasickness with only one dose and without significant side effects.

Motion sickness, unsolved by engineers for ages, need trouble people no longer. Thanks to the chemist in his laboratory, everyone, including the family pet, can enjoy the far-flung places brought so close by modern transportation.



FINALLY, Bonamine is available for broad civilian use. Here a Sabena Belgian airlines hostess gives two tablets to a passenger on an Atlantic flight to protect her against turbulent motion caused by bad weather. This one dose will last 24 hours.



If You Had Your What Would You

LARKIN C. GREEN, Enka Cake Lacing: "If I had my life to live over I would strive to get a better education so that I could better support my family and be of more service to my community and country. I would have saved money

more regularly so that I might have more financial security in my later life.



Larkin Green



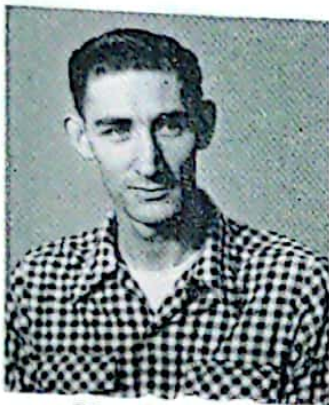
George Smith

GEORGE SMITH, Lowland Chemical: "I guess if I had it all to do over again, I'd get married young and settle down early. You see, I'm still single. Now don't get me wrong, I'm not hopeless—far from it. But world conditions are only temporarily bright."

CARLOS E. KUYKENDALL, Enka Vacuum Wash: "If I had my life to live over, I would do all in my power to get a college education. A person doesn't realize how much an education really means to him until he grows older. Then it's usually too late, especially if he has a family and responsibility. But there are many benefits and advantages you can gain with a college education that you are not in the least aware of until you experience the field of work."



C. E. Kuykendall



Hugh Holt

HUGH HOLT, Lowland Textile: "If I had my life to live over, there are a lot of things which I have done that I would do differently the second go-round. One thing at the top of the list is that I would break into the entertainment field, try to become a good hillbilly musician and a radio entertainer. There's plenty of good money and lots of satisfaction in this work."

Life to Live Over, Do Differently?



Mrs. Pressley

MRS. CARRIE PRESSLEY, Enka Slashing: "I guess I would live my life over about the same as I have. I would have tried to have gotten a better education so I could have secured a better job, especially with week-ends off. I would have tried to save money and prepare more for the future than I have in the past. But, personally, I had rather think about the future, since there is no chance to bring back the past."



KEITH QUARLES, Lowland Filter Crew: "If I could start all over again, I would go through college. I had a scholarship which I could have used. But I didn't. I see now that a college graduate has many more chances at the better jobs than does a high school graduate."



Keith Quarles



W. R. Barnwell

W. R. BARNWELL, Enka Pot Spinning: "If I had my life to live over, I certainly would go to school and study medicine. I've always wanted to be a doctor. However, as it actually happened, I was forced to quit school and go to work on the farm. I had to in order to make a living. My over-all greatest wish, however, is to do more for my Lord and fellow man. This is the one thing I believe most people could do more of and would if they had their lives to live over."



Mrs. Payne

MRS. FAYE PAYNE, Lowland Textile: "If I had my choice of things to do over again, I believe I would go further with my education. I'd at least make an effort to get a college degree. A college education, I believe, would equip me to be a better citizen, to meet people better, and to enjoy life more."



Why Study MATH?

Adapted from material by General Electric, this article is directed to all employees of American Enka and, particularly, their children.

DO you know what's going to become of you when you get out of high school?

If you don't, you'd better start thinking about it. Of course, maybe you have thought about it. Maybe you're planning to go to college. But if that's the case, it only changes the question a little: Do you know what's going to become of you when you get out of college?"

By this time you're probably thinking: "So what?" The answer to that is this: No matter what you plan to do when you get out of high school or college, you're probably going to need more mathematics.

Why Math Is Important

Mathematics is going to be important to you no matter who you are or what you expect to become after school. Some people don't need much; they can get along with nothing more than arithmetic. Others need more math — maybe algebra,

or geometry, or both. Still others need a lot of math—things like trigonometry or calculus. Let's take a few cases. Let's start at the top and work back; let's start with the people who need a lot of math.

The world today is pretty complicated. It's changed a lot in the past 40 years. Forty years ago there weren't many scientists and engineers; the world was only just beginning to realize how important science and engineering are.

The automobile was just getting started. Airplanes were a novelty.



Radio and television hadn't been born yet. Most homes had no electricity; they got their light from oil or gas,

they cooked on a wood, coal, or gas stove, they kept their food in an ice-box and washed their clothes in a washtub with a hand scrubbing board.

We Need Trained People

Progress made its mark . . . and today we have to have more and more specially trained people. We need them not only to work out the really tough problems of science like learning how to harness the power locked up in the atom—we need them not only to produce new and wonderful materials like plastics, to find new ways to conquer disease, to design the machines of industry and the labor-saving gadgets of the home—we need them more and more for the ordinary things of everyday life.

It takes special training nowadays to be a good carpenter, plumber, or automobile mechanic. But those are simple compared to electronics. We used to think a radio serviceman had to have a pretty special kind of training, but it's much tougher for a TV serviceman today.

But What About Me?

Right now you may be thinking: "That's all right for technical people, but I want to be an artist, a druggist, or a nurse." All right, let's see.

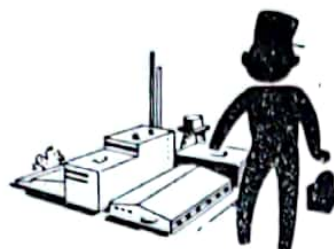
Most artists go in for what artists call *applied* art. They want to use their ability to draw and paint in advertising, or interior decorating, or something that will pay them good money. But the people in business who hire the artists for that kind of work say that simple artistic ability is not enough any more. There are lots of fellows and girls with artistic ability, but not enough of them know

anything about physics or mechanical things—or mathematics.

To be a druggist you have to be a chemist. That means you have to study chemistry. And don't let anybody tell you that you can learn chemistry without knowing something about algebra.

How about a nurse? One of the required subjects in a course of nursing in a modern hospital is known as *Materia Medica*. And one of the things you'll learn in *Materia Medica* is how to figure out doses and solutions of medicines and similar things. Algebra is important in doing the figuring. Too many nurses flunk out of the course nowadays because their math is weak.

Applies to Trades, Too



It's the same thing with a trade. Whether you want to be a draftsman, a machinist, a molder, or a pattern-maker, you'll find out that you need algebra and geometry, plus other things like trigonometry.

Trouble today is that young people don't start early enough in the right subjects. This means that if you want to be an engineer or scientist or almost anything at all these days out of the ordinary, you've got to start thinking of it now, while there's still a chance to study those subjects you need to start with. And one of the most important of these rock-bot-

(Continued on next page)

tom subjects is mathematics.

But the fellows and girls in high school aren't getting enough math. The United States Office of Education says that only 20 per cent of all high school students are taking math.

It's true that you can get along these days without much more than simple arithmetic if you're not particularly ambitious, but there are lots of times that more math would be a big help to you in your everyday affairs.

Figures Surround Us

A famous British mathematician says that we live surrounded by figures — cooking recipes, railway



timetables, unemployment insurance, fines, taxes, war debts, schedules of working hours, speed limits, bowling averages, betting odds, salaries, automobile and truck weights, temperatures, rainfall, hours of sunshine, miles per gallon, electricity and gas meter readings, bank interest, parcel post and freight rates, radio wavelengths, automobile and tire pressures, and many, many more. And we need to know how to use our figures.

Take the case of the fellow in Milwaukee not so long ago who was picked up by a motorcycle cop for speeding. The cop didn't check the speed on his speedometer; he was stationed at a street corner and guessed the speed. They went before the judge in police court, and the driver of the car got the cop to admit that the

car had stopped for a traffic light just before the arrest was made. The driver then proved to the judge by mathematics that no car in existence could have picked up speed fast enough to be exceeding the speed limit where the cop was stationed. The judge let him off.

What Is Math?

What is mathematics, anyway? When you come right down to it, all—or nearly all—of mathematics, no matter how advanced, no matter how strange it may seem, is just the four simple parts of arithmetic: addition, subtraction, multiplication, and division. The more advanced branches of mathematics teach you how to use these four parts of arithmetic to solve harder problems, and they teach you to do these four things fast.

For we use the simple kinds of math as stepping stones to reach the more complicated kinds. Once we learn addition, subtraction, multiplication, and division, it's easy to learn algebra. Once we learn algebra, it's easy to learn geometry. Logarithms are just a kind of short-cut to help solve problems in arithmetic. Algebra's another short-cut.

Geometry, however, isn't really mathematics at all. It's the logical study of the shapes and sizes of things. We just use math in figuring out the measurements and capacities of geometrical figures—how big they are or how much you can put into them.

How Far Is the Moon?

Trigonometry is the next stepping stone after geometry. It uses some of the things in geometry as tools for measuring distances. With trigonometry we can do surveying—or we

can measure the distance from the earth to the moon, the sun, or even some of the stars. But when you solve a problem in trig, you still use arithmetic.

Calculus is a wonderful branch of math. While geometry and trigonometry are used to figure out problems about things that are standing still, so to speak, calculus is used to solve problems about things that are always changing . . . like the speed of a bomb dropping out of an airplane.

Yet calculus is just a more elaborate method of using addition, subtraction, multiplication, and division.

Math Sharpens Thinking

One of the most important things we learn while learning math is analysis. When we gain a good grounding in math, we learn to sharpen our ability to analyze things. And when you remember that analysis is just



intelligent, logical thinking, why then you'll begin to see one of the most important things about learning a lot of math. That is: the more math you get, the better you'll be able to think.

One more point. Don't let the symbols of math scare you. They're just a convenient sign language. How-

ever, they're one of the reasons higher mathematics or subjects like chemistry or electrical engineering frighten many students. For example, the

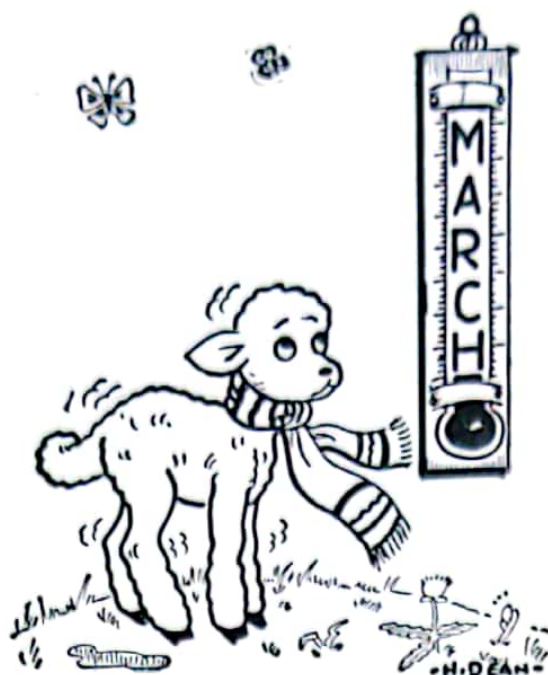
formula $E = \frac{MV^2}{2}$ may scare the daylights out of you at first sight. But each letter has a simple meaning. The formula, translated into English, says: Energy (E) equals half of the product of the mass (M) times the square of the velocity (V). When you learn what symbols mean, they won't seem nearly so strange to you.

If you've understood what has been said, you know these things:

1. The world today is complicated.
2. That means we need lots more people with special training.
3. That means we'll all need more math.
4. Mathematics can help us even if we don't need it in our jobs.
5. All math is based on simple arithmetic.
6. Most of all math is just special ways of using arithmetic or of doing arithmetic fast.
7. Much of the strangeness of math is caused by the symbols and formulas, and they're just a convenient sign language.

It's to your advantage to study as much math as you can, while you still have the chance. And the best time to get a good groundwork in math is while you're still in junior and senior high school. You'll find it much easier to get through college if you get a good grounding in math now. It will help you to get a better job afterwards, too. Most important of all, it will help you to think better and to get more out of life.

Next month: **WHY STUDY ENGLISH?**



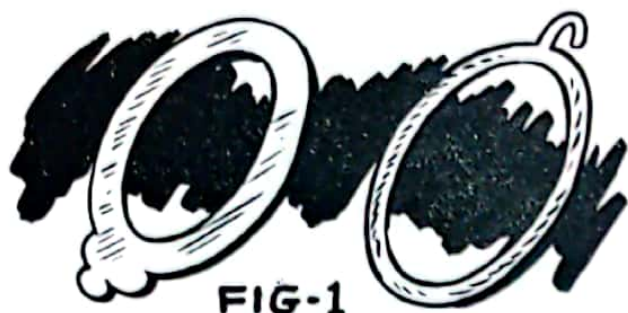
Small Frys'

ery rings will also be useful, if you have any; they're the wood or metal rings that are used to hold window drapes on the



Pirate Earrings

To make a set of pirate earrings which are very big and colorful (Fig.



rod. A typical one is shown at the right in Fig. 1.

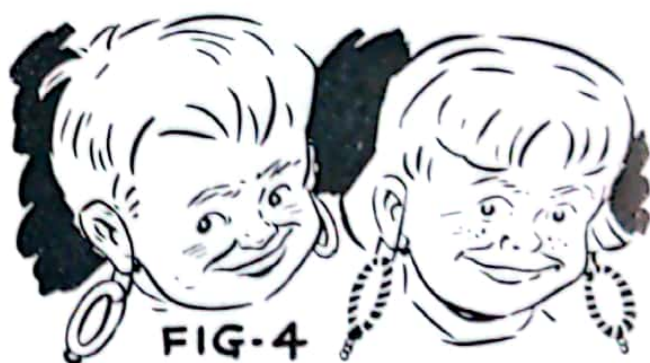
The cardboard type of pirate earring is shown at the left in Fig. 1. To make it, cut a ring out of cardboard, leaving a tab at the bottom to serve as the foundation for a "gem" to be made of string.

Color the cardboard with your

4), all you need is some cardboard, some string, and your crayons. Drap-

SMILE, SMILE, SMILE!

Pack up your troubles in your old
kit bag,
And smile, smile, smile,
While you've a lucifer to light
your fag,
Smile boys, that's the style;
What's the use of worrying?
It never was worth while, so—
Pack up your troubles in your old
kit bag,
And smile, smile, smile!



crayons (Fig. 3). Then select string of a contrasting color and, as shown in Fig 2, wrap it around the tab until you have formed a ball that

Playground

will resemble a big jewel.

Tie a loop of string to the earring, then hang it on your ear as the boy has done in Fig. 3.

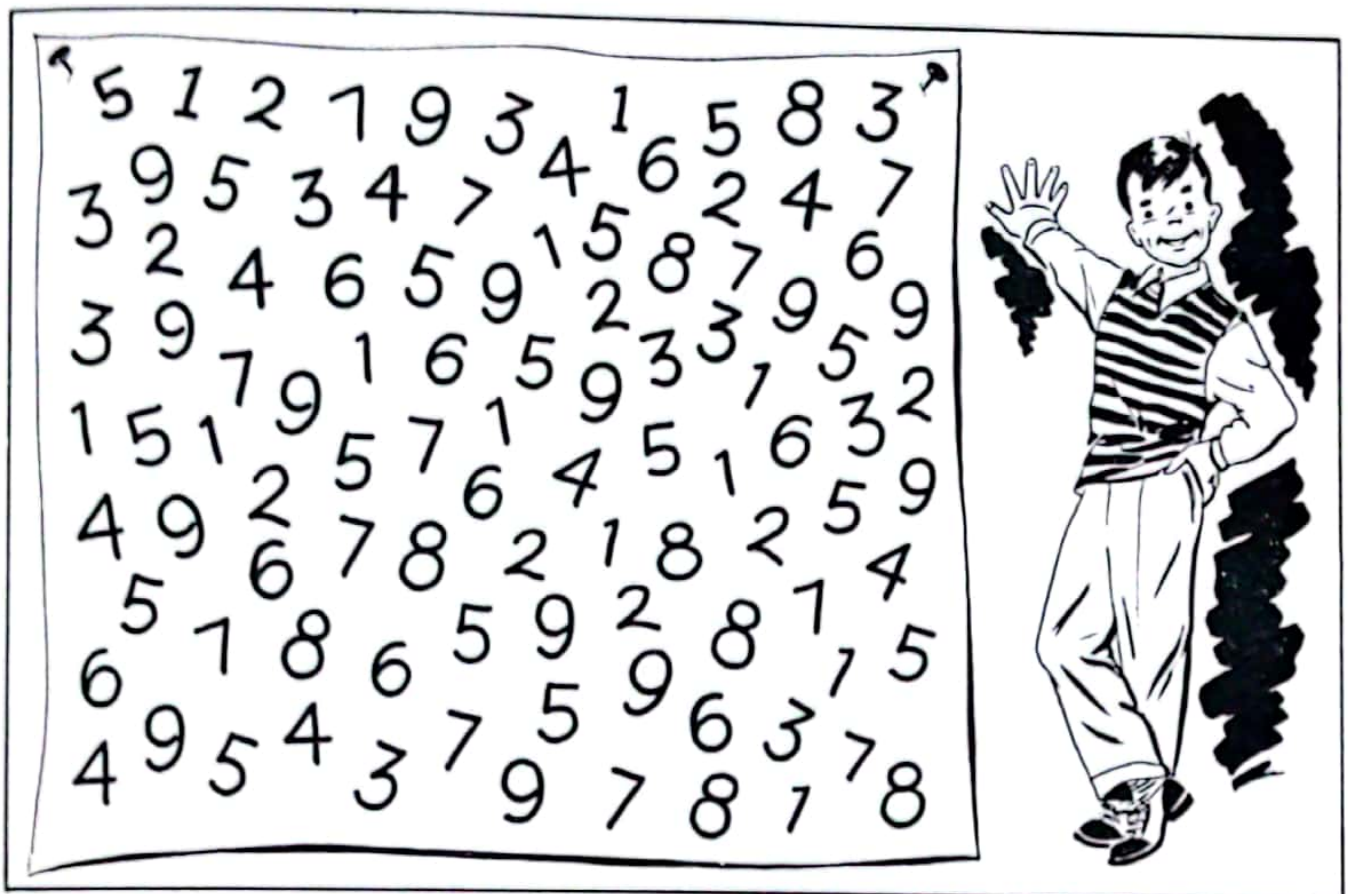
The drapery-ring type of earring requires no coloring or other special preparation. Simply tie a loop of string to the hook which is attached to the ring and hang it on your ear.



Answer to Puzzle

There are 16 fives in the picture.

How Many Fives Has Jimmy Printed Here?



This is a test to see how sharp your eyes are. Count all the fives Jimmy has printed on the big piece of paper without marking through them with a pencil. When you believe you have spotted them all, look at the correct answer elsewhere on Small Frys' Playground.



FATE OF A FABRIC... Miss Jackie Bible of the Lowland Plant models a yellow-flowered afternoon dress by Frank Starr in Onondaga's Enka Sheer, woven entirely of Enka Rayon.

A Textile Dept. employee, Miss Bible likes to go dancing and enjoys watching all sporting events.

DR. J. C. RICH, beloved doctor who practiced 43 years in Hominy Valley, died last month. Shown here visiting a farm home, Dr. Rich was known for his willingness to make calls at any hour in any weather . . . with no thought of fee. (Photo by G. Spaanbroek)



